

Preliminary Draft

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# napa countywide community climate action plan

**JUNE 30, 2009.**



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## acknowledgements

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## about this preliminary draft

This Preliminary Draft Napa Countywide Community Climate Action Plan contains targeted actions and GHG reduction strategies that will serve as the basis for the upcoming technical analysis of impacts and costs. These targeted actions and strategies include an initial inventory of the measures and activities underway or proposed by all of the local jurisdictions in Napa County: American Canyon, City of Napa, Yountville, St Helena, Calistoga, and, Napa County.

This Preliminary Draft is for internal staff review only. The technical analysis underway between July and September 2009 will help determine the scale at which actions must be implemented to reach the AB32 GHG reduction targets and their costs. Once complete, the technical analysis will inform short and long term feasibility and help the community assess priorities and develop an implementation plan.

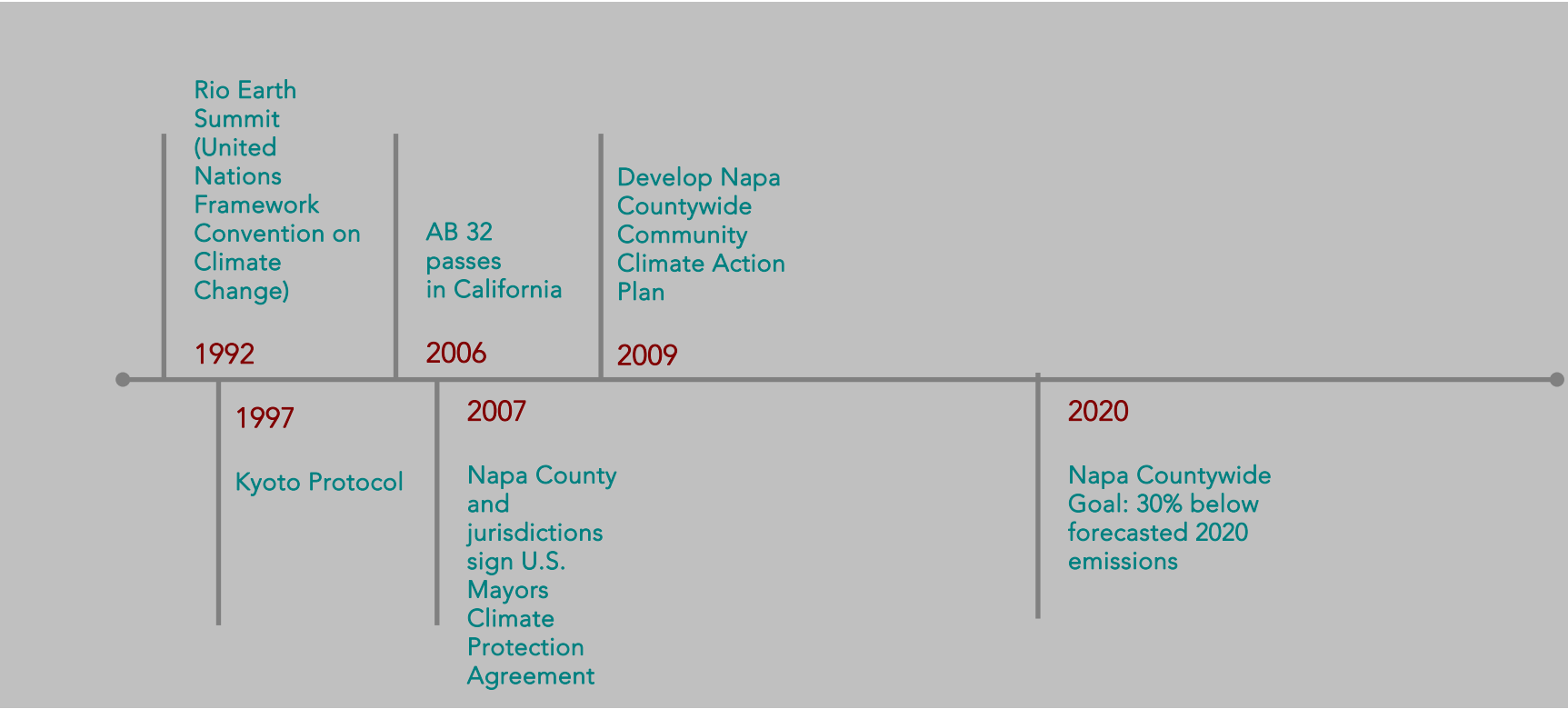
The Plan development process follows the ICLEI five-step milestone process. As of June 2009, milestones 1 and 2 are complete and the Preliminary Draft represents the first deliverable toward completion of milestone 3, Develop Local Action Plans.

## ICLEI FIVE STEP MILESTONE PROCESS

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1. Baseline emissions inventory and forecast
  2. Emissions reduction targets
  3. Develop Local Action Plans
  4. Implement policies and measures
  5. Monitor and verify results
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## timeline of climate action plan development and implementation



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## executive summary

Climate change presents a defining challenge for the 21st century. The world's leading scientists and members of the Intergovernmental Panel on Climate Change (IPCC) report that carbon emissions from human activities have begun to destabilize the Earth's climate. Billions of people will experience these changes through threats to public health, national and local economies, and supplies of food, water and energy. With its proximity to the Napa River, the southern part of Napa County stands to be affected by projected sea-level rise. A changing climate could affect or alter natural riparian habitats, infrastructure, and agricultural activities throughout. Cities across the United States and around the globe are assessing the impact of local emissions and creating action plans to address this urgent global issue.

The challenge of climate change is more urgent than ever. In response, all of the local cities and County of Napa and several local organizations have engaged in planning and implementing GHG reduction actions. In March 2009, the Napa County Transportation and Planning Agency (NCTPA), which includes staff and elected officials from all local jurisdictions completed a countywide assessment of carbon emissions. This inventory serves as the baseline for forecasting future emissions and helps inform the actions identified in this climate action plan.



In addition, these efforts go well beyond reducing carbon emissions, and help us to:

**Clean Up Local Air Pollution.** When you cut carbon emissions, you also reduce air pollution – such as carbon monoxide, sulfur dioxide, benzene, and particulates. Less pollution means cleaner air and healthier families.

**Develop the Local Economy.** Shifting to a low carbon future underscores the importance of local jobs for residents, and of supporting local businesses. Napa County could stay within the county to pay for energy conservation and development of new renewable energy sources.

**Support a Healthy Living Environment.** Actions in this plan support the development of healthy urban centers that are walkable, bikable, and include a variety of local services and goods. Actions will also ensure the protection and preservation of Napa’s agricultural lands and significant natural resources.

**Save Money.** Using less energy means lower energy bills for residents, business and government.

**Encourage Renewable Energy Use and Production.** Every action in this Plan will reduce our reliance on fossil fuels. As fossil fuel supplies become more uncertain and prices increase, a reduced reliance on volatile, non-domestic oil supplies through the use of renewable local energy will both boost the local economy and make us less vulnerable to geopolitical forces.

**Lead the Way.** Napa County could serve as a model for jurisdictions worldwide by fighting local emissions with targeted policies and actions.



## CLIMATE ACTION PLAN OUTCOMES

### Napa Countywide Community Climate Action Plan Outcomes

#### Economic Sustainability

- A world-famous grape-growing and wine-making region
- A viable, thriving agricultural industry
- Locally-produced resources
- A range of employment and a skilled workforce
- Businesses conserve and renew resources

#### Equal Access to Community Resources

- Equitable access to parks, schools, grocery stores, and medical services
- A rational transportation system that prevents sprawl and its attendant impacts

#### Environmental Sustainability

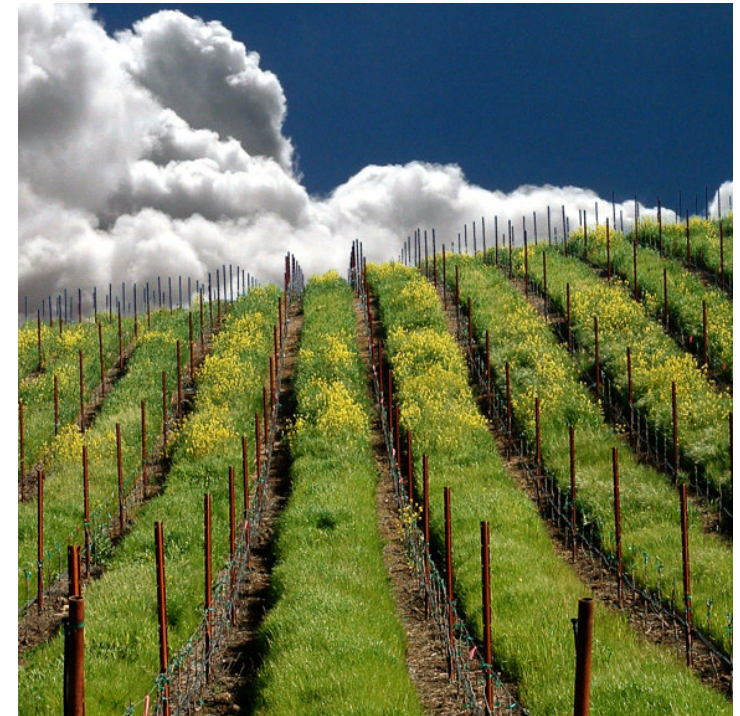
- Napa River is clean and healthy
- Thriving, diverse native habitat and species
- Safeguarded environment
- Efficient use of water, land, and energy resources
- Renewable resources are primary energy source

#### Quality of Life

- Retained rural character and outstanding quality of life
- Affordable and diverse housing types

#### Adaptation

- Focus on minimizing risk and maximizing preparedness



## NAPA'S COUNTYWIDE OBJECTIVES

Napa County's Objectives Map to six core planning actions areas:

Transportation and Mobility

Buildings and Energy

Consumption and Solid Waste

Agriculture, Natural Resources, and Urban Forests

Community Engagement

Local Government Operations



The Napa Countywide Community Climate Action Plan serves as a guiding document to identify ways in which the community can reduce greenhouse gas emissions and adapt to the effects of climate change.

The Plan:

- Proposes a 30 percent target reduction in GHG emissions from projected 2020 levels by 2020.
- Establishes shared countywide community objectives to achieve this target.
- Focuses on major existing, proposed and feasible actions.

To draft this Countywide Community Climate Action Plan, the NCTPA worked with all of the local jurisdictions to identify the objectives and actions most likely to foster the long-term changes necessary to achieve the countywide emission reduction goal.

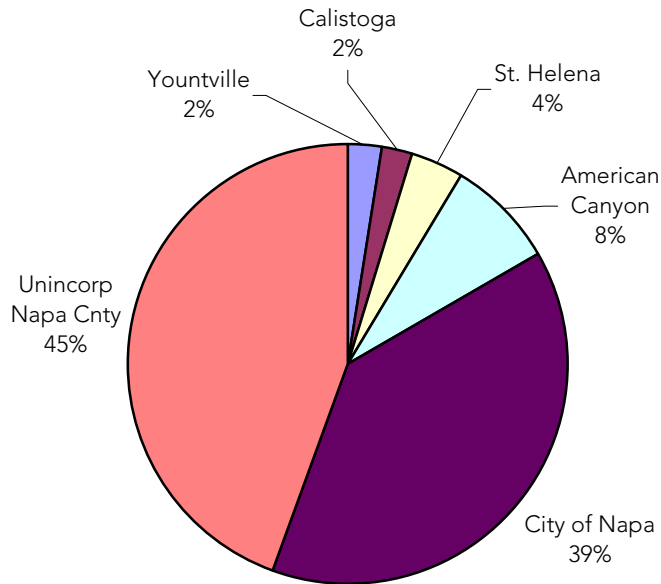
Key criteria used in the upcoming technical analysis to determine the high leverage and high impact actions include: the magnitude of expected emissions reductions, the cost of implementation, the availability of funding, and the degree of community support and local control. The technical analysis will assess the potential GHG reduction impacts across several areas:

- Energy Efficiency
- Demand Reduction and Control
- Renewable Energy Sources
- Transportation

All of the local governments in Napa County are committed to implementation of these actions and to consistent and adaptive evaluation of progress toward the reduction target.

**CARBON FOOTPRINT**

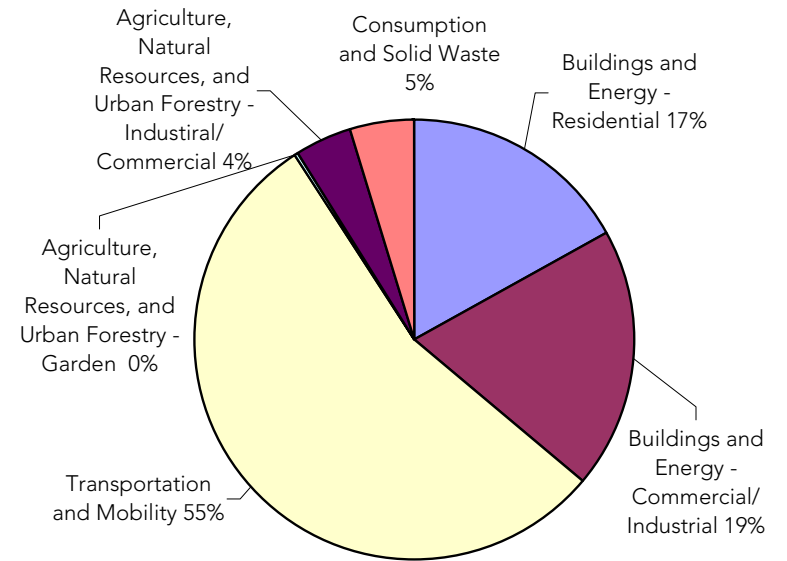
2005 Napa Countywide GHG Emissions by Jurisdiction



**GHG Emissions**

*Unincorporated Napa County and the City of Napa are the major sources of GHG emissions in the County.*

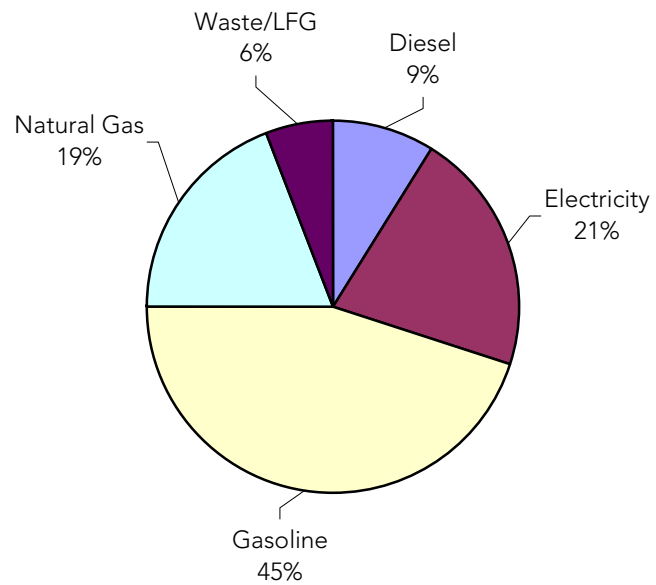
2005 Napa Countywide GHG Emissions by Sector



**GHG Emission Reductions**

*The highest impacts will come from reductions in the transportation and built environment sectors, because together they constitute 91% of the GHG emissions in Napa County.*

## 2005 Napa Countywide GHG Emissions by Source



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*Gasoline, electricity, and natural gas are the major sources of greenhouse gas emissions in Napa County.*

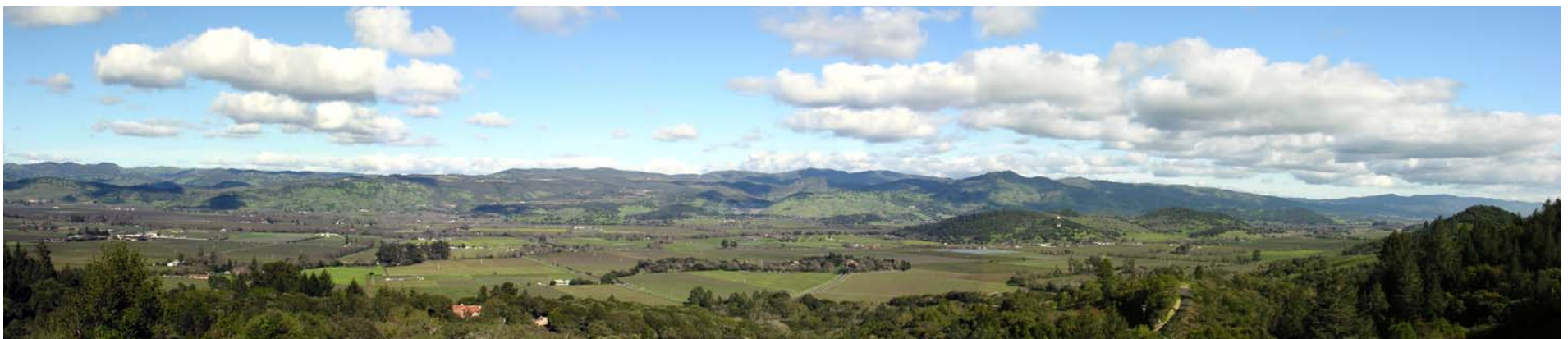
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2020 AB32 Target Reductions (15% reduction from 2005 baseline)

	<i>2005 Baseline</i>	<i>2020 Forecast</i>	<i>AB32 2020 Target</i>	<i>CO2e Reduced from 2020 Forecast</i>	<i>% CO2e Reduced from 2020 Forecast</i>
Yountville	28,305	31,924	24,059	7,865	25%
Calistoga	28,427	31,480	24,163	7,317	23%
St. Helena	46,052	49,541	39,144	10,397	21%
American Canyon	91,449	152,393	77,732	74,662	49%
City of Napa	455,062	544,572	386,803	157,769	29%
Unincorporated Napa County	550,986	656,989	468,338	188,651	29%
<b>Total Napa County</b>	<b>1,200,281</b>	<b>1,466,900</b>	<b>1,020,239</b>	<b>446,661</b>	<b>30%</b>



## 2020 OBJECTIVES AND ACTIONS

### Transportation and Mobility

Reduce demand for fossil fuel by decreasing vehicle miles traveled, improving transit options, and improving the fuel efficiency of vehicles.

T1	Enhance our commitment to urban-centered growth, adopting policies, zoning and design standards in each jurisdiction to encourage mixed-use, "walkable" and "bikable" neighborhoods.
T2	Make wise land use decisions that maintain or improve the County's overall "balance" of 70,690 jobs and 64,100 employed residents by locating jobs and housing in proximity to each other and improving the match between wages and housing cost.
T3	Complete a multi-use countywide trail from Calistoga to American Canyon, and adopt and implement pedestrian and bicycle networks within each city and town that connect to it.
T4	Maintain and enhance existing express bus, local bus, and paratransit services and complete construction of a centralized transit center in downtown Napa.
T5	Expand Park and Ride areas and other support facilities to encourage public transportation use, and car and van pooling.
T6	Study rail and bus rapid transit options in the Highway 29 corridor between Vallejo and downtown Napa, and implement when feasible.
T7	Optimize fuel efficiency. Design and operate the public street system; consider fuel efficiency in the design of street extensions, connections, and right-of-way controls at intersections; and, monitor and adjust traffic signals.
T8	Evaluate truck and freight rail routes, and develop policies and strategies to improve circulation and address neighborhood compatibility issues.
T9	Adopt and implement the NCTPA Strategic Transportation Plan to increase transit service and ridership throughout Napa County.
T10	Adopt policies and ordinance changes to reduce vehicle miles traveled by supporting local hiring, food production, farmers markets, and community-based "buy local" campaigns.
T11	Evaluate parking standards in downtown areas to help reduce vehicle miles traveled.
T12	Require discretionary development projects to assess and mitigate the impacts of vehicle miles traveled using transportation demand management programs including transit amenities.
T13	Adopt policies and ordinances that encourage car-free tourism.

Encourage and support the switch from fossil-fuel powered vehicles to renewable energy powered vehicles.

T14

Adopt policies and programs that help businesses and organizations with fossil-fuel powered fleet vehicles switch to vehicles powered by clean, renewable energy sources.

## BUILDINGS AND ENERGY

Reduce energy demand through conservation and efficiency.

BE1	Implement an AB811 program, making funding available to residential and commercial property owners seeking to improve their properties to conserve energy and water, and to generate solar energy.
BE2	Pursue State and Federal funding programs designed to reduce energy demand through conservation and efficiency.
BE3	Implement improved energy conservation (Title 24) standards for new buildings starting in July 2009 and other State building code standards for high performance "green" buildings beginning in 2011.
BE4	Adopt policies and ordinance changes to reduce energy use by promoting domestic water conservation and requiring water efficient landscape improvements associated with new construction.
BE5	Reduce greenhouse gas emissions from buildings and energy use. Require or request discretionary development projects to assess greenhouse gas emissions due to energy use, and to incorporate energy and water conservation measures into projects along with other features or programs.

Improve the energy supply by switching from fossil fuels to renewables.

BE6	Increase local renewable energy generation such that the County will always generate more than X watts of renewable energy per capita.
BE7	Adopt policies and ordinances to remove regulatory impediments and economic disincentives associated with the generation and use of energy from renewable sources such as wind, geothermal, and solar energy.



CONSUMPTION AND SOLID WASTE

Achieve overall waste diversion of 75% to 90% by 2020.

SW1	Enact ordinances and create incentives to achieve construction and demolition debris waste diversion of 75% to 90% by 2020.
SW2	Enact ordinances and create incentives to achieve organic (food and green) waste diversion of 75% by 2020.
SW3	Establish collection services in all cities for segregated food waste from commercial sources.
SW4	Encourage home composting of organic waste.
SW5	Create and support other programs, such as the Napa County Green Business Program, that help achieve the 75% to 90% overall waste diversion goal.
SW6	Adopt environmentally preferable purchasing policies and explore joint-purchasing agreements with partner agencies, and local jurisdictions and businesses.

## AGRICULTURE, NATURAL RESOURCES, AND URBAN FORESTS

Protect and increase the amount of vegetation and biomass in soil and reduce emissions from agricultural sources.

AN1	Adopt policies and ordinances that support local agriculture, food production, and community gardens.
AN2	Adopt policies, ordinances, and plans that create and enhance urban forests and greenways.
AN3	Assess the impact of land use changes, new vineyards, and urban development on carbon sequestration.
AN4	Support efforts by local growers and restaurants to produce and use locally grown food, and remove associated regulatory hurdles.
AN5	Adopt policies and ordinances to protect habitat and mitigate the conversion of oak woodlands and other important plant communities by permanently protecting similar habitat.

Encourage responsible and sustainable agricultural and landscaping practices.

AN6	Support and promote the Napa Green Certified Winery Program and the Napa Green Certified Land Program ("Fish Friendly Farming"), as well as other practices.
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Significantly reduce water use and protect local water resources.

AN7	Adopt landscape ordinances that promote drought resistant plants, and restrict lawns and other high water demand plants unless reclaimed or grey water systems are used.
AN8	Develop and adopt energy saving and environmentally sound domestic water conservation plans.

## COMMUNITY ENGAGEMENT

Market programs and conduct community outreach to increase participation in GHG reduction efforts.

Engage and advocate for collaborative, policy and legislative solutions at regional, state and federal levels.

Advocate for programs, policies and legislation to reduce global emissions.

CE1	Partner with community-based non-profit organizations and others to undertake public outreach and education efforts that broaden community involvement in reducing greenhouse gas emissions.
CE2	Market and encourage participation in incentive programs that improve energy efficiency.
CE3	Foster and build public-private partnerships that help achieve greater energy efficiency and reduce greenhouse gas emissions.
CE4	Promote programs designed to advance sustainable business practices, such as the Napa County Green Business Program.
CE5	Participate in and help develop effective regional, state, and federal solutions to reduce emissions.
CE6	Engage and assist local agencies and utility companies toward achieving greenhouse gas reduction targets.
CE7	Enable long-term solutions by investing in science and engineering education.
CE8	Support USA participation in international greenhouse gas reduction efforts.

## LOCAL GOVERNMENT OPERATIONS

Reduce fossil fuel consumption by local government operations.

LG1	Transition government fleets to vehicles powered by clean, renewable energy sources.
LG2	Install electric vehicle charging stations with funding from State and Federal sources.
LG3	Encourage alternatives to agency employee use of single-occupancy vehicles by providing bicycle racks, preferential parking for carpools and vanpools, commuter information, and incentives.

Improve the energy efficiency and reduce carbon emissions of City and County facilities and operations.

LG4	Perform audits and regularly monitor the effectiveness of City and County energy-efficiency implementation measures and adapt them to meet targets.
LG5	Convert street lighting, water pumping, water treatment, and other energy-intensive operations to more efficient technologies.
LG6	Ensure that new government facilities incorporate cost-effective strategies for reducing greenhouse gas emissions, conserving energy and water, and utilizing sustainable construction practices.
LG7	In City and County purchasing decisions, consider carbon emissions from the production, transportation, use, and disposal of goods as a criterion.

Reduce solid waste from City and County operations and facilities.

LG8	Recover 70% to 85% of all waste generated in City and County operations.
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## introduction

### CLIMATE CHANGE OVERVIEW

A balance of naturally occurring gases dispersed in the atmosphere determines the Earth's climate by trapping solar radiation. This phenomenon is known as the greenhouse effect. Modern human activity, most notably the burning of fossil fuels for transportation and electricity generation, introduces large amounts of carbon dioxide and other gases into the atmosphere. Reductions in the planet's forested regions, where greenhouse gases are banked, are also a major contributor to the increasing greenhouse effect. Collectively, these gases intensify the natural greenhouse effect, causing global average surface temperature to rise, which in turn affects global climate patterns.

In response to the threat of climate change, communities worldwide are voluntarily reducing greenhouse gas emissions. The Kyoto Protocol, an international effort to coordinate mandated reductions went into effect in February 2005 with 161 countries participating. While there are a growing number of nations committed to the Kyoto Protocol, as of December 2008, the United States is the only major industrialized country that has not signed the Protocol.

The Intergovernmental Panel on Climate Change (IPCC) is a scientific intergovernmental body established by the World Meteorological Organization (WMO) and by the United Nations Environmental Programme (UNEP). IPCC was established to provide decision-makers with an objective

source of information about climate change. IPCC has called the evidence of the impacts of greenhouse gas emissions (GHG) on the world's climate "unequivocal."

By April of 2008 all six local governments in Napa County committed to becoming members of ICLEI – Local Governments for Sustainability (ICLEI) and participating in the Napa County Climate Protection and Energy Efficiency Action Plan development process sponsored by the Napa County Transportation and Planning Agency (NCTPA) and funded by the Bay Area Air Quality Management District (BAAQMD)

The 2005 census estimates Napa County's population at 133,574, the 34th most populous county in the State of California. Like other metropolitan areas, inhabitants of the county and the cities therein contribute to the problem of global warming, while also holding immense potential to contribute to the solution. The energy consumed and the waste produced within the county's boundaries result in thousands of tons of heat-trapping greenhouse gas emissions. But, as is evidenced by the widespread and active involvement of staff from all jurisdictions in Napa County in the development of a Climate Protection Action Plan, the local governments are firmly committed to building on existing efforts to reduce the emissions that cause global warming.



Regional governments and nations across the world can only manage what they measure. The first step in managing greenhouse gas emissions, therefore, is to establish an inventory of those emissions. Below is a chart of global greenhouse gas emissions, which includes the amount of short tons of carbon dioxide equivalent (tons CO<sub>2</sub>e) that is generated worldwide, within the United States, the State of California, and in Napa County. For context, California is the

16th largest emitter in the world - if it were considered a country of its own - second only to Texas in the US. Per capita emissions in California, however, are among the lowest in the US. Further, emissions in Napa County are significantly less than the California average.

This document is the result of these efforts. It identifies actions to ensure Napa Countywide emissions



## CLIMATE ACTION PLAN OUTCOMES

### Napa Countywide Community Climate Action Plan Outcomes

#### Economic Sustainability

- A world-famous grape-growing and wine-making region
- A viable, thriving agricultural industry
- Locally-produced resources
- A range of employment and a skilled workforce
- Businesses conserve and renew resources

#### Equal Access to Community Resources

- Equitable access to parks, schools, grocery stores, and medical services
- A rational transportation system that prevents sprawl and its attendant impacts

#### Environmental Sustainability

- Napa River is clean and healthy
- Thriving, diverse native habitat and species
- Safeguarded environment
- Efficient use of water, land, and energy resources
- Renewable resources are primary energy source

#### Quality of Life

- Retained rural character and outstanding quality of life
- Affordable and diverse housing types

#### Adaptation

- Focus on minimizing risk and maximizing preparedness

On December 19, 2007, the Bay Area Air Quality Management District Board of Directors awarded \$3 million in Climate Protection Grants to Bay Area local governments and nonprofits for implementation of innovative projects to reduce GHG emissions. The Napa County Transportation and Planning Agency (NCTPA) was awarded a grant to support climate action plan development in the County. The NCTPA teamed with MIG, the Climate Protection Campaign, and ICLEI – Local Governments for Sustainability to develop the Napa countywide baseline emissions inventory, target reductions and a preliminary slate of existing, proposed and potential actions to reduce emissions and improve energy efficiency.

Additional funding was granted from the Napa Valley Community Foundation to complete the technical analysis of projected GHG reduction impacts and costs. This work is projected to be completed by September 2009.

Once completed, the Napa Countywide Community Climate Action Plan will guide future implementation and foster effective collaboration between government, business and community organizations toward achieving the GHG reduction targets.



## OPPORTUNITY FOR CLIMATE PROSPERITY

**Clean Up Local Air Pollution.** When you cut carbon emissions, you also reduce air pollution – such as carbon monoxide, sulfur dioxide, benzene, and particulates. Less pollution means cleaner air and healthier families.

**Develop the Local Economy.** Shifting to a low carbon future underscores the importance of local jobs for residents, and of supporting local businesses. Dollars currently spent outside of the county could stay within the county to pay for energy conservation and production measures.

**Support a Healthy Living Environment.** Actions in this plan support the development of healthy built environments that are “walkable,” “bikable,” and include a variety of local services and goods. Actions will also ensure the protection and preservation of Napa’s agricultural lands and significant natural resources.

**Save Money.** Using less energy means lower energy bills for residents, business and government.

**Encourage Renewable Energy Use and Production.** Every action in this Plan will reduce our reliance on fossil fuels. As fossil fuel supplies become more uncertain and prices increase, a reduced reliance on volatile, non-domestic oil supplies through the use of renewable local energy will both boost the economy and make us less vulnerable to geopolitical forces.

**Lead the Way.** Napa County could serve as a model for jurisdictions worldwide by fighting local emissions with targeted policies.





## climate protection in napa county

A great deal of work is being done at the local level on climate change as well. ICLEI—Local Governments for Sustainability has been a leader both internationally and domestically for more than ten years, representing over 770 local governments around the world. ICLEI was launched in the United States in 1995 and has grown to more than 230 cities and counties providing national leadership on climate protection and sustainable development. In June 2006, ICLEI launched the California Local Government Climate Task Force as a formal mechanism to provide ongoing input and collaboration into the State of California’s climate action process. ICLEI also works in conjunction with the U.S. Conference of Mayors to track progress and implementation of the U.S. Mayors Climate Protection Agreement, launched in 2005, which more than 376 mayors have<sup>1</sup> signed to date pledging to meet or beat the Kyoto Protocol emissions reduction target in their own communities.

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*Over the last several years, all of the local governments in Napa County have taken numerous actions to reduce GHG emissions and improve energy efficiency in the County.*

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<sup>1</sup> Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report: “Climate Change 2007”

Over the last several years, all of the local governments in Napa County have taken numerous actions to reduce GHG emissions and improve energy efficiency in the County. These actions include, but are not limited to:

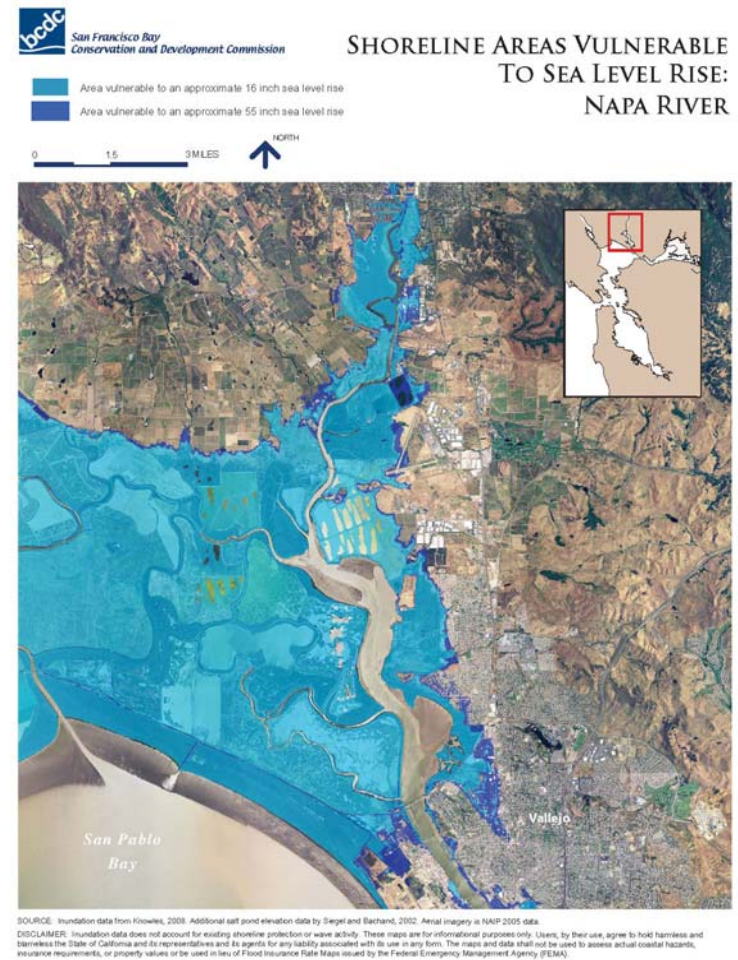
- The City of Napa’s long-term water management strategy commits the city to implementing the appropriate Best Management Processes to ensure future supply reliability.
- The City of Napa recently adopted the nation’s first green building code to cut energy and water usage.
- Napa County General Plan sets a concrete goal for the year 2030 of reducing 50% the number of work trips in private automobiles.
- City of Calistoga’s Proclamation declaring the last Saturday in March from 8:30-9:30 pm to be “Earth Hour.”
- City of St. Helena’s General Plan Update includes a Climate Change Element.
- Growth focused urban limit lines.

## LOCAL CLIMATE CHANGE IMPACTS

While climate change is a global problem influenced by an array of interrelated factors, climate change is also a local problem with serious impacts foreseen for the cities and County of Napa.

**Sea Level Rise.** According to the Union of Concerned Scientists, the sea level in the State of California is expected to rise up to 12 inches of the next hundred years. The Pew Center on Climate Change has reported that this would result in the erosion of beaches, bay shores and river deltas, marshes and wetlands and increased salinity of estuaries, marshes, rivers and aquifers.<sup>2</sup> This increased salinity has the potential to damage or destroy crops in low-lying farmlands. Infrastructure at or near sea level, such as harbors, bridges, and roads, would also be impacted by a rising sea level...

The San Francisco Bay Area Conservation Commission has modeled the impact of sea level rise for two different scenarios (16 inches at mid-century and 55 inches at the end of the century). These models illustrate a tremendous impact on Napa County and along the Napa River. A significant portion of Napa County would be under water with 16 inches of sea level rise.



<sup>2</sup> Neumann, James E. for the Pew Center on Global Climate Change. "Sea Level Rise & Global Climate Change: A Review of Impacts to the US Coasts." February 2000

## napa countywide climate action plan

**Public Health.** Warming temperatures and increased precipitation resulting from climate change can also encourage mosquito-breeding, thus engendering diseases that come with mosquitoes, such as the West Nile County of Napa Climate Action Plan 13 Virus, a disease of growing concern in the Napa region.

Fluctuating seasons and temperatures could result in more extreme heat waves and cold spells in Napa County. Heat waves are expected to have a major impact on public health and be a determinant factor of mortality. Extreme temperatures could affect the health of vulnerable residents in Napa, such as senior and youth populations.



**Plants and Vegetation.** Napa County is home to a particularly diverse population of plants. It contains 1,102 native plant taxa, or 32% of the state's native flora. The County's plants and vegetation support many wildlife species including many rare, threatened, and endangered species including the endangered California clapper ray and the threatened northern spotted owl, among many others.

Native plants and animals are also at risk as temperatures rise. Scientists are reporting more species moving to higher elevations or more northerly latitudes in response. Increased temperatures also provide a foothold for invasive species of weeds, insects and other threats to native species. The increased flow and salinity of water resources could also seriously affect the food web and mating conditions for fish that are of both of economic and recreational interest to residents. In addition, the natural cycle of plant's flowering and pollination, as well as the temperature conditions necessary for a thriving locally adapted agriculture could be affected, with perennial crops such as grapes taking years to recover.

In Napa County, climate change may result in decreased genetic diversity, a reduction in seed dispersal, decreased or extirpated population, and long-term distribution changes.

**Water.** Napa County is subdivided by parallel northwest-trending mountain ridges into three principle watersheds: Napa River watershed, Putah Creek/Lake Berryessa watershed, and Suisun Creek watershed. The major aquifers in the County are the north Napa Valley groundwater basin. Domestic, commercial, and industrial water is derived from surface water (53%) and groundwater (47%). The Napa River has recently been defined as water quality impaired.

Water quality and quantity are also at risk as a result of changing temperatures. With warmer average temperatures, more winter precipitation will fall in the form of rain instead of snow, shortening the winter snowfall season and accelerating the rate at which the snowpack melts in the spring. The decrease in snow-pack is particularly relevant in the State of California and Napa County, as the Sierra snow-pack provides approximately 80% of California's annual water supply.

**Natural Disasters.** Natural disasters in Napa County include earthquakes, seismicity, wildfires, flooding, and other geologic hazards. Precipitation varies significantly throughout the county and annual precipitation varies from 22.5 to 75 inches per year. Snow is not uncommon along the higher ridges in the county. Natural disasters, such as wildfires and flooding, are precipitated by temperature and precipitation changes. Climate change impacts could increase the number of natural disasters in Napa County.

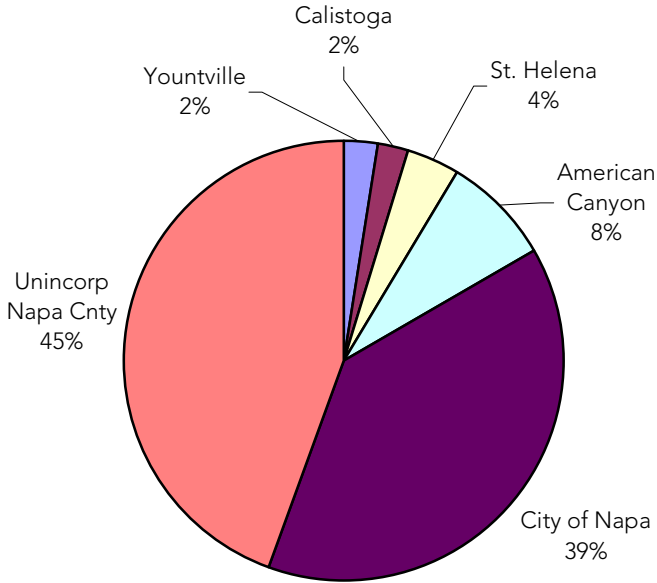
Climate models predict a 4°F temperature increase in the next 20 to 40 years, with an increase in the number of long dry spells, as well as a 20-30% increase in precipitation in the spring and fall. More frequent and heavier precipitation causes flooding and mudslides, which would incur considerable costs in damages to property, infrastructure and even human life in Napa County.

In addition, the increase of wildfires due to continued dry periods and high temperatures is another expected impact of continued climate change. These climate change impacts could impact agriculture growing seasons and production. Grapes, for example, grow well in Napa County. Yet, if the County's climate changed and impacted water resources, grape growing seasons could be altered.

SOURCES OF CARBON EMISSIONS

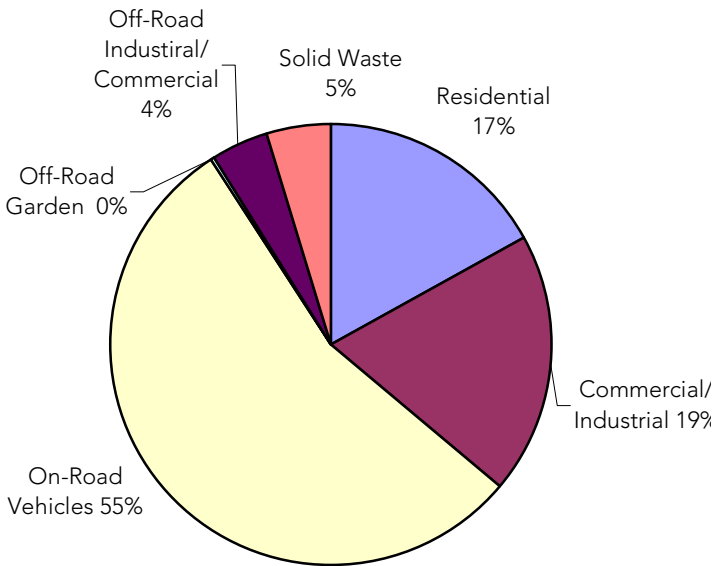
Countywide Emissions

2005 Napa Countywide GHG Emissions by Jurisdiction



The majority of GHG Emissions in 2005 were sourced in Unincorporated Napa County and the City of Napa. The majority of state route roads are located in the unincorporated areas of the county, which are frequented by county residents and visitors alike.

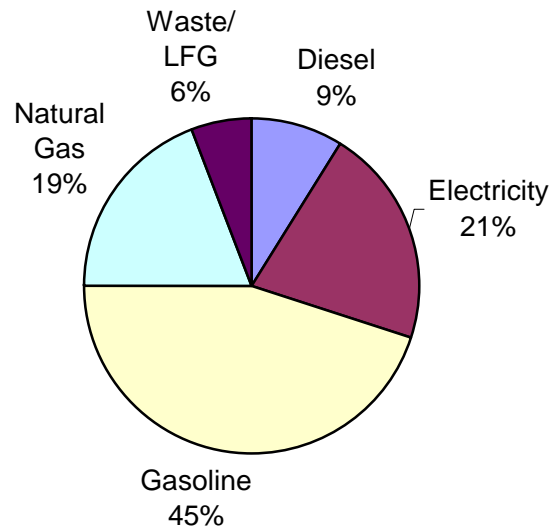
2005 Napa Countywide GHG Emissions by Sector



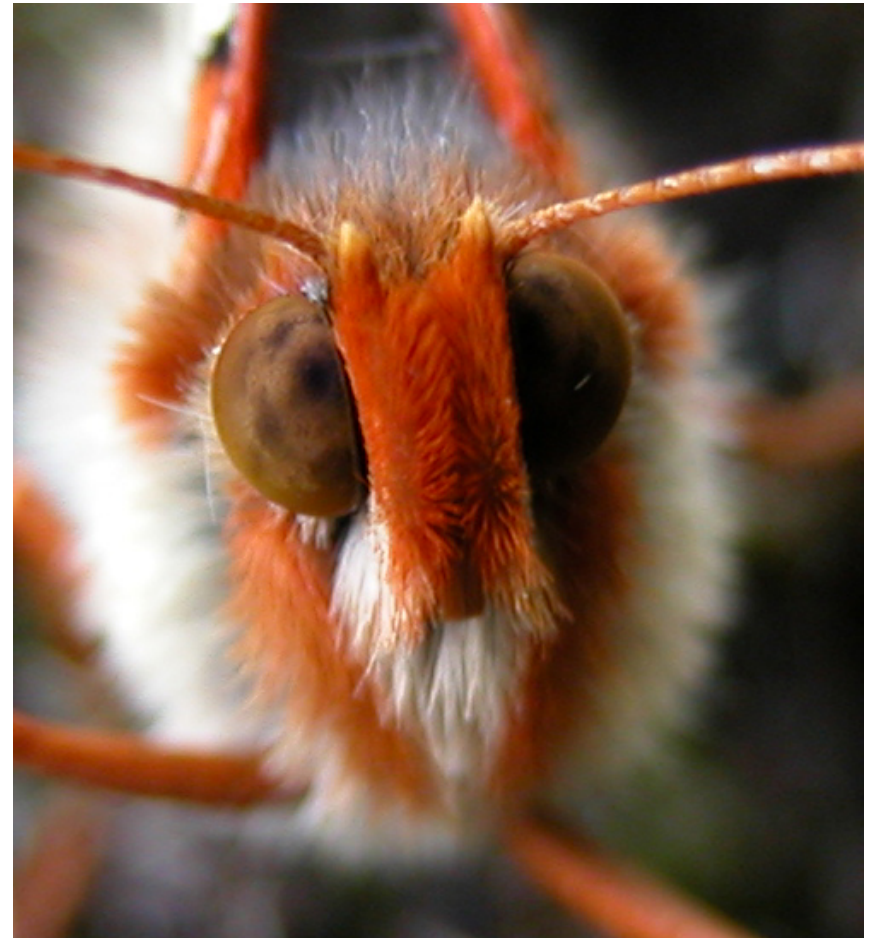
In 2005, the majority of Napa Countywide emissions were from on-road vehicles (55%). Napa County residents tend to commute outside county limits for employment. Additionally, Napa County serves as a major north-south arterial for truck traffic. Passenger vehicles and truck traffic contribute significantly to GHG emissions in the county.



## 2005 Napa Countywide GHG Emissions by Source



The majority of Napa County's greenhouse gas emissions are sourced from gasoline (45 percent) and electricity (21 percent). This is consistent with the major sector sources of emissions. Transportation and mobility uses gasoline for power, thereby emitting greenhouse gases into Napa County's air. Additionally, residential and commercial buildings, the second major sector responsible for Napa County greenhouse gas emissions use electricity for power.



## napa countywide climate action plan

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*Napa Countywide emissions are projected to increase 22% by 2020 if no climate protection action is taken*

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In order to reach the countywide target GHG emissions reductions, Napa County must reduce total emissions by 30 percent of 2020 forecasted emission levels.

Projected to receive the majority of the county's population growth in the next 10 years, American Canyon must compensate for this growth by reducing GHG emissions by 49 percent of 2020 forecasted emission level.

### 2020 AB32 Target Reductions (15% reduction from 2005 baseline)

	<i>2005 Baseline</i>	<i>2020 Forecast</i>	<i>AB32 2020 Target</i>	<i>CO<sub>2</sub>e Reduced from 2020 Forecast</i>	<i>% CO<sub>2</sub>e Reduced from 2020 Forecast</i>
Yountville	28,305	31,924	24,059	7,865	25%
Calistoga	28,427	31,480	24,163	7,317	23%
St. Helena	46,052	49,541	39,144	10,397	21%
American Canyon	91,449	152,393	77,732	74,662	49%
City of Napa	455,062	544,572	386,803	157,769	29%
Unincorporated Napa County	550,986	656,989	468,338	188,651	29%
<b>Total Napa County</b>	<b>1,200,281</b>	<b>1,466,900</b>	<b>1,020,239</b>	<b>446,661</b>	<b>30%</b>

## Jurisdiction-specific Emissions

### Yountville

Placeholder – Yountville GHG emissions and sector



**Calistoga**

Placeholder – Calistoga GHG emissions and sector

**St. Helena**

Placeholder – St. Helena GHG emissions and sector

**American Canyon**

Placeholder – American Canyon GHG emissions and sector

**City of Napa**

Placeholder – City of Napa GHG emissions and sector

**Unincorporated Napa County**

Placeholder – Unincorporated Napa County GHG emissions and sector

## Opportunities and Challenges

Napa County and its jurisdictions are faced with several opportunities, issues and challenges when tackling the countywide carbon footprint. These include:

- GHG emission forecasts assume no actions are taken.
- Napa County's transportation and land use patterns function as an integrated countywide system--no actions in a single jurisdiction can adequately address the target reduction.
- Napa County is also dynamically linked to regional, statewide, national and global challenges and solutions.
- The Napa wine industry has already shown strong leadership in transitioning to renewable energy sources.
- Effective transportation solutions will require both cooperative action among all Napa jurisdictions and strategic planning in cooperation with our neighboring counties.



## FRAMEWORK FOR LOCAL CLIMATE PROTECTION

Napa County's success in reducing carbon emissions rests on a foundation of sound land use and transportation planning, as well as alternative energy sources. Establishing a mandatory limit on carbon emissions ensures the reduction of carbon emissions and supports sound planning and infrastructure development. Though adequate attention and action related to combating climate change has been lacking at the federal level, the State of California has taken significant steps. California has been leading the charge on combating climate change through legislation and initiatives.

This section highlights the status of climate protection action in the global, national, state and regional context.

### Global

The world's collective response to documenting climate change is commendable. The Intergovernmental Panel on Climate Change is a powerful, authoritative body of the world's top climate scientists. Their work earned them the Nobel Prize in 2007.

ICLEI through its Cities for Climate Change™ provides strong world leadership for local governments, as mentioned previously.



The Kyoto Protocol, agreed to in 1997, and entered into force in 2005, represents the strongest global collective climate protection action to date. As of November 2007, 175 parties had ratified the protocol; however, the U.S. is not one of the ratifying parties. Meanwhile, increasing amounts of GHG emissions enter the atmosphere and Earth continues to warm. Clearly, the Kyoto Protocol is not a solution commensurate with the scale of the problem.

## National

U.S. administration and Congressional action regarding the climate crisis has also been inadequate. To date only voluntary efforts are required by the federal government, and there is no national emissions reduction target.

Recent positive steps include the enactment of a national energy bill in December 2007. This law raises automotive fuel economy standards for the first time in more than three decades by requiring automobile manufacturers to produce cars with an average of 35 miles per gallon by the year 2020. The law also boosts federal support for alternative fuel research and energy conservation.

Other positive federal signs include progress made by bills in 2007, although none were passed.

- America's Climate Security Act, authored by Senators Lieberman (ID-CT) and Warner (R-VA), called would set a target to reduce total U.S. greenhouse-gas emissions 19% below 2005 levels (4% below 1990 levels) by 2020 and 63% below 2005 levels by 2050.
- Safe Climate Act of 2007 (H.R. 1590) introduced in March of 2007 by Representative Waxman (D-Ca) also sets targets (2% reduction each year from 2010 to 2050) and would require actions such as setting caps on emissions of sources and sectors with the largest emissions, issuing and authorizing trading of emission allowances, and penalizing excess emissions.





## State

### Energy

**Senate Bill 1078 Sher, 2002** – Established a Renewable Portfolio Standard requiring electricity providers to increase purchases of renewable energy resources by 1% per year until they have attained a portfolio of 20% renewable resources.

### Land Use and Transportation

**Assembly Bill 1493 Pavley, 2002** – Requires the State Air Resources Board to develop and adopt regulations that achieve the maximum feasible reduction of greenhouse gases from vehicles primarily used for non-commercial transportation by January 200



### Senate Bill 375

In 2006, the Governor signed AB 32 – The Global Warming Solutions Act of 2006 – which requires the State of California to reduce greenhouse gas (GHG) emissions to 1990 levels no later than 2020. SB 375 implements the part of AB 32 that concerns reduction in driving through more compact growth patterns.

SB 375 has five important features:

1. Creation of regional targets for GHG emissions reduction tied to land use (and therefore driving patterns).
2. A requirement that regional planning agencies create a plan to meet those targets, even if that plan is in conflict with local plans.
3. A requirement that regional transportation funding decisions be consistent with this new plan.
4. Tethering together regional transportation planning and housing efforts for the first time.
5. New CEQA exemptions and streamlining for development projects that conform to the new regional plans, even if they conflict with local plans.

### Emissions Inventory and Reduction Target

**Senate Bill 1771 Sher, 2000** – Requires the California Energy Commission (CEC) to prepare an inventory of the state’s greenhouse gas emissions, to study data on global climate change, and to provide government agencies and businesses with information on the costs and methods for reducing greenhouse gases. It also established the California Climate Action Registry to serve as a certifying agency for companies and local governments to quantify and register their greenhouse gas emissions for possible future trading systems.

**Assembly Bill 32 Núñez & Pavley, 2006** – Institutes a mandatory limit on greenhouse gas emissions -- reducing emissions in California to 1990 levels by the year 2020, or 25% below forecasted levels. The bill also directs the California Air Resources Board (CARB) to establish a mandatory reporting system to track and monitor emission levels and requires CARB to develop various compliance options and enforcement mechanisms. On June 1, 2005, Governor Schwarzenegger signed Executive Order #S-3-05 establishing a greenhouse gas reduction target of reducing emissions to 2000 levels by 2010, to 1990 levels by 2020 and 80 percent below 1990 levels by 2050. In April 2006, the California Climate Action Team released its Report to Governor Schwarzenegger and the State Legislature, outlining recommendations and strategies to achieve those reductions.

**Initiatives under CEQA** – The California Attorney General’s office has also begun efforts to include GHG reduction within

the scope of the California Environmental Quality Act (CEQA). These efforts have been largely targeted at quantifying and mitigating the effect on emissions of new development and local general plans



## Regional Efforts

Four Bay Area agencies – the Bay Area Air Quality Management District, the Metropolitan Transportation Commission, the Association of Bay Area Governments, and the San Francisco Bay Conservation and Development Commission - have also formally made climate protection part of their agendas. Separately they are pursuing trailblazing regulatory and incentive-based programs, and together through the Joint Policy Committee they are also forging a coordinated effort to reduce emissions throughout the region. Elected representatives and others from Sonoma County helped spur regional climate protection leadership through their influence on regional agencies.



## FINANCIAL RESOURCES

Financing provides the means to implement actions included in this climate action plan. Innovative changes in public fiscal policies can stimulate Napa's economy. Transforming Napa County's energy infrastructure creates new opportunities for the community to invest in itself and its future. The following is a list of financial resources.

### Climate Action Planning

Climate action planning includes greenhouse gas emissions inventory, climate action plan, regional blueprint, and General Plan and Climate Change Integration. Financing opportunities include:

- Air districts, private grants, MPOs, SB 732 and Stimulus Package Funding Programs.

### Energy Efficiency

Energy efficiency projects include building retrofits, LED/Efficient traffic signals and street lights, building energy codes, energy audits, and urban greening. Financing opportunities include:

- California Public Utilities Commission (CPUC), the California Solar Initiative (CSII) Solar Rebate Program, the CPUC Self-Generation Incentive Program (SGIP), CEC Energy Efficiency Financing Low-Interest Loan Program, utility companies, air districts, SB 732, and Stimulus Package Funding Programs.

### Renewable Energy

Renewable energy includes landfill methane capture and use, solar financing program, solar energy, wind energy, fuel cells and biomass. Financing opportunities include:

- California Public Utilities Commission (CPUC), the California Solar Initiative (CSII) Solar Rebate Program, the CPUC Self-Generation Incentive Program (SGIP), CEC Energy Efficiency Financing Low-Interest Loan Program, CIWMB, AB 811, SB 1754, AB 2466, utility companies, and Stimulus Package Funding Programs.





### Transportation Efficiency/Trip Reduction

Transportation efficiency and trip reduction programs include zoning code updates; bike paths, lanes, and pedestrian walkways; synchronization of traffic signals, and fleet upgrades. Financial resources include:

- California Public Utilities Commission (CPUC), the California Solar Initiative (CSII) Solar Rebate Program, the CPUC Self-Generation Incentive Program (SGIP), CEC Energy Efficiency Financing Low-Interest Loan Program, Stimulus Package Funding Programs, and air districts.

### Waste Reduction

Waste reduction programs include recycling and composting, and Environmentally Preferable Purchasing programs (EPP).

Funding is available from:

- Stimulus Package Funding Programs and CIWMB.

### Community Outreach

Community outreach programs include public outreach campaigns to promote energy efficiency, trip reduction, vehicle efficiency, waste reduction, among others. Financial resources are available from:

- Stimulus Package Funding Programs, air districts, MPOs, private grants, and utility companies.



## CURRENT PLANNING PROCESS

The plan development process follows the Five Step Milestone Process developed by ICLEI – Local Governments for Sustainability.

### ICLEI'S Five Step Milestone Process

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1. Baseline emissions inventory and forecast
  2. Emissions reduction targets
  3. Local Action Plans
  4. Implement policies and measures
  5. Monitor and verify results
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The Development of this Preliminary Draft completes Step 3 in the Five Step Milestone Process.

With this Communitywide Climate Action Plan, Napa County seeks to identify the actions the county and cities can take that have the greatest potential to reduce emissions.

In addition to the county's jurisdictions, individual entities, organizations, and programs will lead many of the county and cities' efforts to implement this Plan, including the Napa County Transportation and Planning Agency.

The Napa Countywide Community Climate Action Plan is a foundation for this effort that will be revised and built upon in the years to come. The Plan is an iterative process that incorporates and builds on best practices and lessons learned. Reduction strategies and actions will continue to evolve as new climate-related technology, policy, and resources become available.

In the next phase of the plan development process, we will be assessing:

- Feasibility of actions
- Projected GHG Reductions
- Estimated investment
- Timeframe and process of implementation

See Next Steps section for additional information regarding the next phases of the project.

## napa countywide community climate action plan

This Communitywide Climate Action Plan details 45 specific objectives and related actions intended to achieve the interim goal of a 30 percent reduction in emissions by 2020. This Plan is also intended to help Napa County reach the challenging statewide goal of 80% reduction in carbon emissions by 2050.

While Napa County and its jurisdictions will have a major, direct role in carrying out many of the objectives and actions, successful implementation will require many diverse partners, from non-profit organizations to business leaders to individual residents.

### 2020 OBJECTIVES AND 2012 ACTIONS

The objectives and associated actions are grouped into the following categories.

- **Transportation and Mobility**
- **Buildings and Energy**
- **Consumption and Solid Waste**
- **Agriculture, Natural Resources, and Urban Forests**
- **Community Engagement**
- **Local Government Operations**



Countywide actions and related jurisdiction actions are included in the following pages. “Actions Common to All” are climate protection actions that will be implemented by all county jurisdictions, while “Related Jurisdiction Actions” are specific to one jurisdiction and support the identified countywide action.

As noted earlier, these actions may change and expand during Phase II with the feasibility analysis and community outreach process



## 2020 OBJECTIVES AND ACTIONS

### Transportation and Mobility

Reduce demand for fossil fuel by decreasing vehicle miles traveled, improving transit options, and improving the fuel efficiency of vehicles.

#### Actions Common to All

#### Related Jurisdiction Actions

T1

Enhance our commitment to urban-centered growth, adopting policies, zoning, and design standards in each jurisdiction to encourage mixed-use, "walkable," and "bikable" neighborhoods.

- Adopt specific plans incorporating smart growth planning principles for development or redevelopment of areas larger than 5 acres. *American Canyon*
- Plan and implement mixed use development in the commercial core area along Highway 29 wherever feasible. *American Canyon*
- Continue to implement Safe Routes to School, and construct sidewalks where needed, based on Pathway Plan priorities. *American Canyon*
- Implement the City of Calistoga Bicycle Transportation Plan, including construction of specific trails, sidewalks, and river crossings recommended in the plan. *Calistoga*
- Support current (or stronger) language in the Housing Element Update that calls for denser, more compact development and increased emphasis on developing infrastructure for non-motorized transportation. *Calistoga*
- Update City planning and zoning regulations to promote land use strategies that include compact, mixed-use development, higher density development, and infill. *Calistoga*
- Growth focused urban limit line for development. *Napa*
- Encourage residential and mixed use development near services and transit. *Napa*
- Policy requiring minimum density in mixed use categories. *Napa*
- Promote creative and efficient use of vacant lots and built on land. *Napa*
- Develop community public parks and open spaces to compliment higher density development. *St. Helena JED*
- Support higher density urban infill development. *St. Helena*
- Increase walkability in downtown area for one-stop shopping. *St. Helena*
- Construction of the Yountville section of Napa County Bike Path in the Caltrans right-of-way to connect with existing and in-progress trails (Existing). *Yountville*

*Actions Common to All*

*Related Jurisdiction Actions*

<p><b>T2</b> Make wise land use decisions that maintain or improve the County's overall "balance" of 70,690 jobs and 64,100 employed residents by locating jobs and housing in proximity to each other and improving the match between wages and housing cost.</p>	<ul style="list-style-type: none"> <li>• Diversify economic base in American Canyon to reduce need for commuting. <i>American Canyon</i></li> <li>• Support jobs-housing balance to reduce dependency on commuters. <i>St. Helena</i></li> </ul>
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<p><b>T3</b> Complete a multi-use countywide trail from Calistoga to American Canyon, and adopt and implement pedestrian and bicycle networks within each city and town that connect to it.</p>	
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<p><b>T4</b> Maintain and enhance existing express bus, local bus, and paratransit services and complete construction of a centralized transit center in downtown Napa.</p>	
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<p><b>T5</b> Expand Park and Ride areas and other support facilities to encourage public transportation use, and car and van pooling.</p>	
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*Actions Common to All*

*Related Jurisdiction Actions*

T6	Study rail and bus rapid transit options in the Highway 29 corridor between Vallejo and downtown Napa, and implement when feasible.
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T7	<p>Optimize fuel efficiency. Design and operate the public street system; consider fuel efficiency in the design of street extensions, connections, and right-of-way controls at intersections; and, monitor and adjust traffic signals.</p> <ul style="list-style-type: none"> <li>• Address traffic congestion by optimizing signal timing, by completing planned improvements to SR 12 and 29, and by completing Devlin Road and Flosden/Newell parallel to SR 29. <i>Napa</i></li> <li>• Coordinate lights through American Canyon (Caltrans).</li> </ul>
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T8	<p>Evaluate truck and freight rail routes, and develop policies and strategies to improve circulation and address neighborhood compatibility issues</p> <ul style="list-style-type: none"> <li>• Permit warehouse and industrial development to utilize rail distribution wherever possible. <i>American Canyon</i></li> <li>• Provide opportunities for a rail distribution station in American Canyon for use by businesses and distribution warehouses not located adjacent to railroad tracks. <i>American Canyon</i></li> </ul>
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*Actions Common to All*

*Related Jurisdiction Actions*

<p><b>T9</b> Adopt and implement the NCTPA Strategic Transportation Plan to increase transit service and ridership throughout Napa County.</p>	<ul style="list-style-type: none"> <li>• Increase transit service and ridership to reduce single-occupancy vehicles commuting between Fairfield and Napa. <i>Napa County</i></li> <li>• Establish a northbound upvalley express bus during peak commute hours. <i>St. Helena</i></li> <li>• Increase transit options. Over time, continue to increase transit options and efficiencies based on usage surveys and other viable research. <i>American Canyon</i></li> </ul>
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<p><b>T10</b> Adopt policies and ordinance changes to reduce vehicle miles traveled by supporting local hiring, food production, farmers markets, and community-based "buy local" campaigns.</p>	
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<p><b>T11</b> Evaluate parking standards in downtown areas to help reduce vehicle miles traveled.</p>	<ul style="list-style-type: none"> <li>• Revise the Off-Street Parking and Loading Ordinance to address parking requirements, parking design and parking exceptions. <i>Calistoga</i></li> <li>• Lower parking standards in downtown area. <i>Napa</i></li> </ul>
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<p><b>T12</b> Require discretionary development projects to assess and mitigate the impacts of vehicle miles traveled using transportation demand management programs including transit amenities.</p>	
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*Actions Common to All*

*Related Jurisdiction Actions*

T13	Adopt policies and ordinances that encourage car-free tourism.
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Encourage and support the switch from fossil-fuel powered vehicles to renewable energy powered vehicles.

T14	Encourage businesses and organizations with fleet vehicles to transition to vehicles powered by clean, renewable energy sources.	<ul style="list-style-type: none"><li>• Encourage employers to offer incentives for carpooling, including use of electric or hybrid vehicles. <i>St. Helena</i></li></ul>
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## Buildings and Energy

Reduce energy demand through conservation and efficiency.

### Actions Common to All

### Related Jurisdiction Actions

<p><b>BE1</b> Implement an AB811 program, making funding available to residential and commercial property owners seeking to improve their properties to conserve energy and water, and to generate solar energy.</p>	
<p><b>BE2</b> Pursue State and Federal funding programs designed to reduce energy demand through conservation and efficiency.</p>	
<p><b>BE3</b> Implement improved energy conservation (Title 24) standards for new buildings starting in July 2009 and other State building code standards for high performance "green" buildings beginning in 2011.</p>	<ul style="list-style-type: none"> <li>• Encourage cool roofs and night-cooling HVAC systems for industrial wine warehouses, and other energy efficient HVAC systems for large stores, facilities and office buildings. <i>American Canyon</i></li> <li>• Adopt State Green Building Codes with local mandates and implement Build It Green (BIG) and Leadership in Energy and Environmental Design (LEED) rating systems. <i>Calistoga</i></li> <li>• Adoption of green building ordinance requiring new commercial and municipal buildings over 30,000 square feet in size to build to a LEED Silver standard. <i>Napa</i></li> <li>• Appointment of a green building task force to make recommendations to staff for the development of a mandatory phase II green building ordinance that will include all new residential and commercial, including municipal, buildings not covered in the existing green building ordinance. <i>Napa</i></li> </ul>

*Actions Common to All*

*Related Jurisdiction Actions*

<p><b>BE4</b> Adopt policies and ordinance changes to reduce energy use by promoting domestic water conservation and requiring water efficient landscape improvements associated with new construction.</p>	<ul style="list-style-type: none"> <li>• Implement higher than state mandated building standards in local building ordinances (including cool roof; prohibition of woodburning fireplaces in new construction; and requiring oversize homes to meet the energy efficiency of smaller homes). <i>St. Helena</i></li> <li>• Revise Public Works standards to use green materials (i.e. flyash in concrete). <i>St. Helena</i></li> <li>• Develop Town Green Building Code. <i>Yountville</i></li> </ul>
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<p><b>BE5</b> Reduce greenhouse gas emissions from buildings and energy use. Require or request discretionary development projects to assess greenhouse gas emissions due to energy use, and to incorporate energy and water conservation measures into projects along with other features or programs.</p>	<ul style="list-style-type: none"> <li>• Encourage residential subdivisions to take advantage of passive solar opportunities. <i>American Canyon</i></li> <li>• Facilitate access to energy saving rebates from PG&amp;E and other utility companies for commercial, industrial, and residential projects of 5 or more units. <i>American Canyon</i></li> <li>• Require any residential project larger than 15 units to be “carbon neutral (including energy use and transportation) using on site design and off site (but within Napa County) off-sets. <i>Napa County a</i></li> <li>• Develop a Housing Element that encourages environment measures. <i>Napa</i></li> <li>• Adoption of a wood burning appliance ordinance reducing emissions. <i>Napa</i></li> </ul>
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Improve the energy supply by switching from fossil fuels to renewables.

*Actions Common to All*

*Related Jurisdiction Actions*

<p><b>BE6</b></p> <p>Increase local renewable energy generation such that the County will always generate more than X watts of renewable energy per capita.</p>	<ul style="list-style-type: none"> <li>• Investigate Community Choice Aggregation. <i>Calistoga</i></li> <li>• Encourage and promote the use of geothermal energy and geo-exchange technology. <i>Calistoga</i></li> <li>• Investigate possible sources of renewable energy e.g., solar/wind power, biofuels, and geothermal power. <i>Calistoga</i></li> <li>• Develop solar and geothermal energy sources at Community Center project (Existing). <i>Yountville</i></li> <li>• Develop solar energy source at the waste water treatment plant. <i>Yountville</i></li> </ul>
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<p><b>BE7</b></p> <p>Adopt policies and ordinances to remove regulatory impediments and economic disincentives associated with the generation and use of energy from renewable sources such as wind, geothermal, and solar energy.</p>	<ul style="list-style-type: none"> <li>• Develop standards for placement of photovoltaic panels so that they can have ministerial approval (don't require Design Review). <i>St. Helena</i></li> <li>• Encourage and/or facilitate one or more pilot projects for wind, geothermal and/or solar power generation in City facilities. <i>Calistoga</i></li> </ul>
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## Consumption and Solid Waste

Increase waste diversion beyond State standards of 75% to 90% by 2020.

### Actions Common to All

### Related Jurisdiction Actions

<b>SW1</b>	Enact ordinances and create incentives to achieve construction and demolition debris waste diversion of 75% to 90% by 2020.
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<b>SW2</b>	Enact ordinances and create incentives to achieve organic (food and green) waste diversion of 75% by 2020.
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<b>SW3</b>	Establish collection services in all cities for segregated food waste from commercial sources.	<ul style="list-style-type: none"><li>• Implement programs to facilitate community waste reduction. <i>Calistoga</i></li></ul>
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<b>SW4</b>	Encourage home composting of organic waste.
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# napa countywide climate action plan

## Actions Common to All

## Related Jurisdiction Actions

<p><b>SW5</b></p>	<p>Create and support other programs, such as the Napa County Green Business Program, that help achieve the 75% to 90% overall waste diversion goal.</p>
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<p><b>SW6</b></p>	<p>Adopt environmentally preferable purchasing policies and explore joint-purchasing agreements with partner agencies, and local jurisdictions and businesses.</p>	<ul style="list-style-type: none"> <li>• Discuss opportunities through the City’s waste hauler to encourage consumers to increase recycling and “smarter purchasing” of less packaged products through information and training, etc. <i>American Canyon</i></li> <li>• Eliminate, through local ordinance, the use of polystyrene food and beverage containers and plastic bags.</li> <li>• Encourage or require reusable packaging.</li> </ul>
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## Agriculture, Natural Resources, and Urban Forests

Protect and increase the amount of vegetation and biomass in soil and reduce emissions from agricultural sources.

### Actions Common to All

### Related Jurisdiction Actions

<p><b>AN1</b> Adopt policies and ordinances that support local agriculture, food production, and community gardens.</p>	<ul style="list-style-type: none"> <li>• Encourage buying local agricultural products through farmers markets held in downtown area. <i>Napa</i></li> <li>• Develop garden produce exchange program; donate excess produce to food bank. <i>St. Helena</i></li> <li>• Promote edible landscaping. <i>St. Helena</i></li> </ul>
<p><b>AN2</b> Adopt policies, ordinances, and plans that create and enhance urban forests and greenways.</p>	<ul style="list-style-type: none"> <li>• Implement an ongoing citywide tree survey and Street Tree maintenance plan for American Canyon. <i>American Canyon</i></li> </ul>
<p><b>AN3</b> Assess the impact of land use changes, new vineyards, and urban development on carbon sequestration.</p>	

*Actions Common to All*

*Related Jurisdiction Actions*

<p><b>AN4</b></p>	<p>Support efforts by local growers and restaurants to produce and use locally grown food, and remove associated regulatory hurdles.</p>
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<p><b>AN5</b></p>	<p>Adopt policies and ordinances to protect habitat and mitigate the conversion of oak woodlands and other important plant communities by permanently protecting similar habitat.</p>	<ul style="list-style-type: none"> <li>• Create an oak woodland management plan that identifies priority areas for conservation easements and land dedication for habitat preservation, and establishes a program for payment of in-lieu fees and replacement plantings when woodlands are impacted.</li> <li>• Require GHG analysis for conversion of woodlands to agriculture. <i>St. Helena</i></li> <li>• Investigate using St. Helena wastewater treatment plant spray field for production of crops that can be converted to biofuel. <i>St. Helena</i></li> </ul>
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**Encourage responsible and sustainable agricultural and landscaping practices.**

<p><b>AN6</b></p>	<p>Support and promote the Napa Green Certified Winery Program and the Napa Green Certified Land Program ("Fish Friendly Farming"), as well as other practices.</p>
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**Significantly reduce water use and protect local water resources.**

*Actions Common to All*

*Related Jurisdiction Actions*

AN7

Adopt landscape ordinances that promote drought resistant plants, and restrict lawns and other high water demand plants unless reclaimed or grey water systems are used.

- Implement existing zoning standards that will add significant landscaping and large tree species along the Highway 29 corridor. *American Canyon*
- Maintain efforts to reduce water use through conservation measures, technology (irrigation and fixtures), drought tolerant landscaping and other means. *American Canyon*
- Adopt a Landscape Ordinance that promotes drought resistant plants, restricts lawns and other high water demand plants unless reclaimed or grey water systems are used. *Calistoga*
- Adopt an Ordinance allowing grey water systems. *Calistoga*
- Water conservation measures imposed by water division. *Napa*
- Investigate impact of tile drainage of vineyards and its effect on the recharge of groundwater, as well as the impacts of water diversion to Napa River. *St. Helena*

AN8

Develop and adopt energy saving and environmentally sound domestic water conservation plans.

## Community Engagement

Market programs and conduct community outreach to increase participation in GHG reduction efforts.

### Actions Common to All

### Related Jurisdiction Actions

<p><b>CE1</b> Partner with community-based non-profit organizations and others to undertake public outreach and education efforts that broaden community involvement in reducing greenhouse gas emissions.</p>	<ul style="list-style-type: none"> <li>• Support and encourage development of programs to involve the public and children to plant trees and create an urban forest. <i>American Canyon</i></li> <li>• Engage the public with water conservation programs and activities, including demonstration gardens and a recognition/awards program for creativity in water conservation. <i>American Canyon</i></li> <li>• Provide Green Building information that residents and contractors can use to reduce energy use. <i>American Canyon</i></li> <li>• Assist in the sponsorship of community events and campaigns that address global warming, renewable energy, "green business," etc. <i>Calistoga</i></li> <li>• Draft correspondence, reports, news releases, brochures, fact sheets, opinion pieces, advertising, etc. to aid in the implementation of CAP measures, particularly those related to outreach and advocacy. <i>Calistoga</i></li> <li>• Coordinate and promote public information – what homes and businesses can do locally – voluntary vs. mandatory. <i>St. Helena</i></li> <li>• Offer green products and services in exchange for community volunteerism. <i>St. Helena</i></li> </ul>
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<p><b>CE2</b> Market and encourage participation in incentive programs that improve energy efficiency.</p>	
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*Actions Common to All*

*Related Jurisdiction Actions*

<p><b>CE3</b></p> <p>Foster and build public-private partnerships that help achieve greater energy efficiency and reduce greenhouse gas emissions.</p>	<ul style="list-style-type: none"> <li>• Promote the Napa Green Certified Winery Program. <i>Napa County</i></li> <li>• Promote the Napa Green Certified Land Program (fish-friendly, farming based program). <i>Napa County</i></li> </ul>
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<p><b>CE4</b></p> <p>Promote programs designed to advance sustainable business practices, such as the Napa County Green Business Program.</p>	
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**Engage and advocate for collaborative, policy and legislative solutions at regional, state and federal levels.**

<p><b>CE5</b></p> <p>Participate in and help develop effective regional, state, and federal solutions to reduce emissions.</p>	<ul style="list-style-type: none"> <li>• Educate City Commissions, Committees and Boards in GHG reduction measures. Once educated, City Commissions, Committees and Boards shall periodically review and discuss citywide GHG reduction efforts and status. <i>Calistoga</i></li> <li>• Support legislation to establish renewable energy portfolio standards for electric utilities, provide opportunities for net metering, and prohibit development of new coal-fired power plants. <i>Calistoga</i></li> <li>• Support upgrades of state-owned roads in California to encourage nonmotorized transportation. <i>Calistoga</i></li> <li>• Support increased fuel efficiency standards for trucks and automobiles in California. <i>Calistoga</i></li> <li>• Support California’s participation in The Climate Registry and a multi-state greenhouse gas emissions reduction (e.g., cap-and-trade) program. <i>Calistoga</i></li> </ul>
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*Actions Common to All*

*Related Jurisdiction Actions*

CE6	Engage and assist local agencies and utility companies toward achieving greenhouse gas reduction targets.
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CE7	Enable long-term solutions by investing in science and engineering education.
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Advocate for programs, policies and legislation to reduce global emissions.

CE8	<p>Support USA participation in international greenhouse gas reduction efforts.</p> <ul style="list-style-type: none"> <li>• Keep abreast of proposed federal legislation and policies to address global warming and actively support specific measures. <i>Calistoga</i></li> </ul>
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## Local Government Operations

Reduce fossil fuel consumption by local government operations.

### Actions Common to All

### Related Jurisdiction Actions

<p>LG1 Transition government fleets to vehicles powered by clean, renewable energy sources.</p>	<ul style="list-style-type: none"><li>• Establish anti-idling policies for City vehicles/drivers. <i>Calistoga</i></li></ul>
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<p>LG2 Install electric vehicle charging stations with funding from State and Federal sources.</p>	
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<p>LG3 Encourage alternatives to agency employee use of single-occupancy vehicles by providing bicycle racks, preferential parking for carpools and vanpools, commuter information, and incentives.</p>	
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Improve the energy efficiency and reduce carbon emissions of City and County facilities and operations

*Actions Common to All*

*Related Jurisdiction Actions*

<p>LG4</p>	<p>Perform audits and regularly monitor the effectiveness of City and County energy-efficiency implementation measures and adapt them to meet targets.</p>	
<p>LG5</p>	<p>Convert street lighting, water pumping, water treatment, and other energy-intensive operations to more efficient technologies.</p>	<ul style="list-style-type: none"> <li>• Limit heating thermostat setpoints to 68 degrees and cooling thermostat setpoints to 75 degrees in City buildings. <i>Calistoga</i></li> <li>• Ensure that all interior and exterior lighting utilizes energy-efficient technology (e.g., Energy Star CFL bulbs and fixtures, LED lights). Modify City facilities lighting system to increase energy efficiency. <i>Calistoga</i></li> <li>• Establish an energy efficient purchasing/leasing policy for new office equipment, appliances, etc. Replace the most inefficient equipment immediately. <i>Calistoga</i></li> </ul>
<p>LG6</p>	<p>Ensure that new government facilities incorporate cost-effective strategies for reducing greenhouse gas emissions, conserving energy and water, and utilizing sustainable construction practices.</p>	

*Actions Common to All*

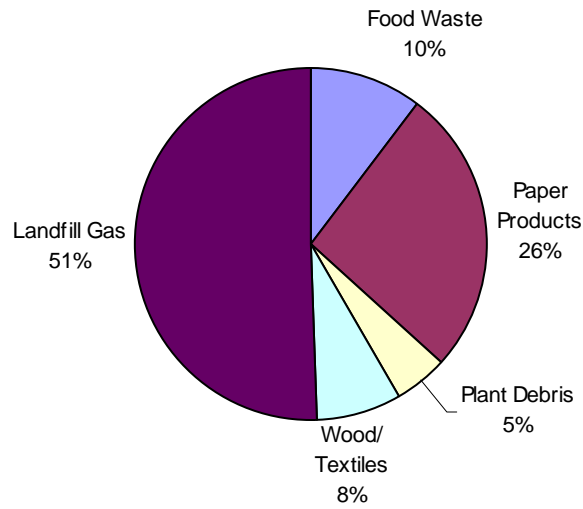
*Related Jurisdiction Actions*

<b>LG8</b>	<b>In City and County purchasing decisions, consider carbon emissions from the production, transportation, use and disposal of goods as a criterion.</b>	<ul style="list-style-type: none"><li>• Adopt EPA’s Comprehensive Procurement Guidelines (CPG)—a key component of the government’s “buy-recycled” program, which offers guidelines covering office paper to construction materials to vehicles.</li><li>• Purchase green office products whenever possible.</li></ul>
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**Reduce solid waste from City and County operations and facilities.**

<b>LG7</b>	<b>Recover 70% to 85% of all waste generated in City and County operations.</b>	<ul style="list-style-type: none"><li>• Establish a comprehensive user-friendly recycling program involving all City departments and facilities.</li></ul>
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### Community Waste Greenhouse Gas Emissions 2005



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*Landfill gas and paper products are the major waste sources of greenhouse gas emissions in Napa County.*

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## next steps

The development of this Preliminary Draft Napa Countywide Community Climate Action Plan completes Phase I of the plan development process. Between the months of July and November, 2009, Phase II and Phase III of the process will be underway. The Plan Development Process Graphic on the following page illustrates the project process.

## PHASE II

### technical and feasibility analysis

The goal of the technical analysis is to identify major high impact and high leverage actions, including supportive financial analysis, necessary to reach target emission levels by 2020, and help set a course for reaching an 80 percent reduction from 1990 levels by 2050.

During this phase of the plan development process, the following will be assessed:

- Feasibility of actions
- Projected GHG Reductions
- Estimated investment
- Timeframe and process of implementation

The potential GHG reduction impacts of actions in this Plan will be assessed using the following framework:

**Energy Efficiency.** Determine overall potential impacts of building retrofit, green building standards, water efficiency programs, etc.

**Demand Response and Control.** Potential reductions from the deployment of automated systems that strategically adjust electrical or gas loads, the use of smart meters that enable adaptive management and monitoring by users, or other demand controls based on alternative demand pricing strategies.

**Renewable Energy Sources.** Assess potential strategies and approximate costs of a local renewable energy plan.

**Transportation.** Assess the potential impacts of the various transportation strategies included in the NCTPA Strategic Transportation Plan and other high impact actions from Sonoma County (e.g. create an electric car share fleet).

### community outreach

The community outreach strategy for Phase II of the plan development process includes two workshops: one Community Coalition Workshop and one Coalition Sponsored Community Workshop. The interactive web portal will be active and outreach materials will be distributed during this phase

## PHASE III

Phase III includes the adoption of the plan and implementation of actions. A Draft and Final Action Plan will be developed during this phase, as well as a second Coalition Sponsored Community Workshop and outreach materials.



